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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,208	02/25/1999	D. CHRISTOPHER DRYER	AM9-98-093	1871

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EXAMINER

SAX, STEVEN PAUL

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 11/22/2004

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/257,208

Applicant(s)

DRYER ET AL.

Examiner

Steven P Sax

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This application has been examined. The amendment filed 12/30/04 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-61, 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tognazzini et al (5886683) and Black et al (5802220).

4. Regarding claim 1, Tognazzini et al show an unobtrusive system for determining a subject's level of interest (column 5 lines 55-68, column 6 lines 1-7, column 9 lines 55-67, column 10 lines 1-15). Tognazzini et al show detecting information regarding what a subject is gazing at or 'attending to' (column 5 lines 54-68, column 6 lines 1-25, column 8 lines 5-19) to determine level of attentiveness to media images and objects on a network. The web browser information (column 11 lines 15-45) are all examples of media. See also Figure 15 and column 16 lines 16-30 for the electronic newspaper

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example. The gaze tracker device (Tognazzini column 9 lines 45-60) is in real time.

Tognazzini et al do not specifically show arousal level per se, but do show user characteristic (gazing) to determine level of interest. Furthermore, Black et al show arousal level by facial expressions (column 3 lines 37-65, column 4 lines 30-50, column 28 lines 30-57) to determine interest. It would have been obvious to a person with ordinary skill in the art to show arousal level in Tognazzini et al, because it would allow a convenient way to utilize user characteristics to determine level of interest.

5. Regarding claim 2, Tognazzini et al show as explained above the gaze determination.

6. Regarding claim 3, Tognazzini et al show determining the fixation time of the gaze (column 10 lines 35-44).

7. Regarding claim 4, Tognazzini et al show in column 11 lines 15-45 the detecting attention to media content.

8. Regarding claims 5-10, Black et al show measuring the subject's facial expressions, head gestures, and speech (column 27 lines 20-41, column 28 lines 30-60). The obviousness to combine is as stated above.

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9. Regarding claim 11, Tognazzini et al show providing relevance feedback (column 6 lines 19-25).

10. Claims 12-22, 23-33, 34-44 each show the same features as 1-11 respectively and are rejected for the same reasons.

11. Claims 45-52 show the same features as 1-7 and 11 and are rejected for the same reasons.

12. Claims 53-55 show the same features as claim 1 and are rejected for the same reasons.

13. Regarding claim 56, as noted, Black et al show measuring the facial and head gestures (column 8 lines 5-29). The claim recites 'includes one of...' and therefore since Ball et al show atleast one of these elements, it therefore covers the claim.

14. Regarding claim 57, as noted, Tognazzini et al show the gaze fixation density and pupil size attribute (column 10 lines 35-44). Black et al show the audio utterance (speech), and upper body movement (head gesture) (again column 27 lines 20-41 and column 28 lines 30-60).

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15. Regarding claim 58, Tognazzini shows providing additional media content as feedback (column 6 lines 19-25) and operates in real time (column 9 lines 45-60).

16. Claims 59-61 show the same features as 56-58 and are rejected for the same reasons.

17. Regarding claim 65, the detecting means in Tognazzini et al (column 10 lines 10-30), and the measuring means in Black et al (column 7 lines 17-35), both output to a determining means. Given the combination, this would then be the same determining means.

18. Regarding claim 66, per the obviousness to combine both references as stated in paragraph 4 of this Office Action, since the arousal level is then used to help determine level of interest, the attention would first have to be detected to determine the particular interest, and then the arousal level measured to help determine level of interest.

19. Claims 62-64, 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tognazzini et al (5886683) and Black et al (5802220) and Handel et al (6195651).

20. Regarding claim 62, in addition to that mentioned for claim 1, neither Tognazzini et al nor Black et al go into the details of adaptively inferring the level of interest, but do mention determining level of interest based on user information. Furthermore, it is

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common in the art to use intelligent systems to adaptively infer level of interest and other determinations, based on user information. See for example Handel et al (Figures 10A, 13, 25, column 29 lines 30-67. column 30 lines 1-15 and 33-49). It would have been obvious to a person with ordinary skill in the art to have the system suggested by Tognazzini et al and Black et al adaptively infer the level of interest, because it would provide a convenient way to determine level of interest based on user information.

21. Regarding claim 63, (the claim only requires at least one), the way in which Handel et al adaptively infers the level of interest includes a decision tree (column 33 lines 15-60).

22. Claim 64 shows the same features as claim 62 and is rejected for the same reasons.

23. Regarding claim 67, in addition to that mentioned for claim 1, neither Tognazzini et al nor Black et al go into the details of presenting more or less information based on level of interest, but do mention responding to user detected information. Furthermore, it is common in the art to use intelligent systems to adaptively respond to user detected information by presenting more or less of an item related to the information detected. See for example Handel et al (Figures 10A, 13, 25, column 29 lines 30-67. column 30 lines 1-15 and 33-49). It would have been obvious to a person with ordinary skill in the art to have the system suggested by Tognazzini et al and Black et al adaptively respond

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to the level of interest by providing more or less information, because it would provide a convenient way to respond to user detected information.

24. Applicant's arguments filed 12/30/03 have been fully considered but they are not persuasive. The systems of Tognazzini et al and Black et al are in fact related, as both measure user information to determine a level of user interest. The system suggested by the combination, and in fact both references themselves, show determining level of interest based on user information. This includes the subject's attention to media content (Tognazzini et al) and subject's arousal level (Black et al). Note that the claim recitation of "determining... based on information" is broad. The newly added claims perhaps bring out more of the information *analysis*, and to this advancement the new art has been added.

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven P Sax whose telephone number is 571-272-4072. The examiner can normally be reached on M-F 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on 571-272-4063. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



STEVEN SAX
PRIMARY EXAMINER